EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	("20050009934").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/03/28 11:25
L2	77626	adduct\$3	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/28 11:05
L3	1	1 and 2	US-PGPUB; USPAT; USOCR	OR	ON	2006/03/28 11:05
L4	1	("20030087969").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/03/28 11:27
L5	1	2001US-0909555.ap,prai.	EPO; JPO; DERWENT	OR	ON	2006/03/28 11:57
L6	2	(("6492559") or ("6051056")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/03/28 11:50
L7	1	("67170 <u>19")</u> .PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/03/28 11:50
L8	123	LASSILA-K\$.in. SLONE-C\$.in. SASSANO-S\$.in. "SASSANO SLONE"-C\$.in.	EPO; JPO; DERWENT	OR	ON	2006/03/28 12:41
L9	1	("4311618").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/03/28 12:41

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptau223dxm

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * * * * SESSION RESUMED IN FILE 'REGISTRY' AT 15:47:40 ON 28 MAR 2006 FILE 'REGISTRY' ENTERED AT 15:47:40 ON 28 MAR 2006 COPYRIGHT (C) 2006 American Chemical Society (ACS)

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 2.20 2.41

FULL ESTIMATED COST

=>Testing the current file.... screen

ENTER SCREEN EXPRESSION OR (END):end

=> screen 1701 AND 1995 AND 2007

L15 SCREEN CREATED

=> screen 1996

L16 SCREEN CREATED

=>

Uploading C:\Program Files\Stnexp\Queries\618117.str

chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

chain bonds :

1-2 2-3 3-4 4-5 5-6 6-7 7-8 8-9 9-10 10-11 11-12 12-13 12-18 13-14 14-15 15-16 16-17

exact/norm bonds :

1-2 3-4 4-5 6-7 7-8 9-10 10-11 12-18 13-14 14-15

exact bonds :

2-3 5-6 8-9 11-12 12-13 15-16 16-17

Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS 10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS

L17 STRUCTURE UPLOADED

=> que L17 AND L15 NOT L16

L18 QUE L17 AND L15 NOT L16

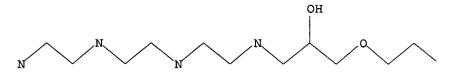
=> d 118

L18 HAS NO ANSWERS

L15 SCR 1701 AND 1995 AND 2007

L16 SCR 1996

L17 STR



Structure attributes must be viewed using STN Express query preparation. L18 QUE L17 AND L15 NOT L16

0 ANSWERS

=> s sample sss 118

SAMPLE SEARCH INITIATED 15:48:18 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 28 TO ITERATE

100.0% PROCESSED 28 ITERATIONS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 243 TO 877

PROJECTED ANSWERS: 0 TO 0

L19 0 SEA SSS SAM L17 AND L15 NOT L16

=> s 118 sss full

FULL SEARCH INITIATED 15:48:51 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 649 TO ITERATE

100.0% PROCESSED 649 ITERATIONS 12 ANSWERS

SEARCH TIME: 00.00.01

L20 12 SEA SSS FUL L17 AND L15 NOT L16

=> d 1-12 all

L20 ANSWER 1 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN

RN 490035-28-4 REGISTRY

ED Entered STN: 14 Feb 2003

CN 5,22-Dioxa-9,12,15,18-tetraazahexacosane-7,20-diol (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C20 H46 N4 O4

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

DT.CA CAplus document type: Patent

RL.P Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)

PAGE 1-A

PAGE 1-B

$$\begin{array}{c} \text{OH} \\ | \\ -\text{CH}_2-\text{CH-CH}_2-\text{OBu-n} \end{array}$$

Predicted Properties (PPROP)

PROPERTY (CODE)	VALUE	CONDITION	NOTE
Bioconc. Factor (BCF)	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	PH 1 25 deg C PH 2 25 deg C PH 3 25 deg C PH 4 25 deg C PH 5 25 deg C PH 6 25 deg C PH 7 25 deg C PH 8 25 deg C PH 9 25 deg C PH 10 25 deg	(1) (1)
(HDAS) Koc (KOC) Log (KOC) Log (LOGD)	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C	(1) (1)

logD (LOGD) logD (LOGD) logD (LOGD) logD (LOGD) logD (LOGD) logP (LOGP) Mass Intrinsic Solubility (ISLB.MASS)	-3.90 -3.57 -2.36 -0.77 0.14 0.441+/-0.781 4.1 g/L	pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C 25 de	(1) (1) (1) (1) (1) (1)
Mass Solubility (SLB.MASS)	1000 g/L 69 g/L 8.5 g/L 4.5 g/L	pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C Unbuffered Water pH 10 99	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Molar Intrinsic Solubility (ISLB.MOL)	0.010 mol/L	25 deg C 25 deg C	(1)
Molar Solubility (SLB.MOL)	2.46 mol/L 2.46 mol/L 2.46 mol/L 2.46 mol/L 2.46 mol/L 2.46 mol/L 2.46 mol/L 2.46 mol/L 0.17 mol/L 0.021 mol/L 0.011 mol/L	pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C Unbuffered Water pH 10 29	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Molar Volume (MVOL)	402.4+/-3.0 cm**3/mol	25 deg C 20 deg C	(1)
Molecular Weight (MW) pKa (PKA)	 406.60 13.73+/-0.20	760 Torr Most Acidic 25 deg C	(1)
pKa (PKA)	9.88+/-0.19	25 deg C Most Basic 25 deg C	(1)
Polar Surface Area (PSA) Vapor Pressure (VP)	 107.04 A**2 5.73E-14 Torr	25 deg C	(1) (1)

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.19 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

- AN 138:124243 CA
- TI Production of alkyl glycidyl ether-capped polyamine antifoaming agents
- IN Sassano, Slone Caroline; Lassila, Kevin Rodney
- PA Air Products and Chemicals, Inc., USA

SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent LA English

IC ICM C11D003-00

ICS C11D003-37

CC 46-4 (Surface Active Agents and Detergents)

FAN.CNT 1

FAN. CN	$T \perp$																
P	ATENT	NO.		KI	MD	DATE			AI	PLI	CATI	ON NO	ο.	DATE			
PI E	P 1277	829		A2	2	2003	0122		E	20	02-1	5652		20020	0716		
E	P 1277	7829		A.	3	2003	0502										
E	P 1277	829		В:	1	2005	1019										
	R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,
		ΙE,	SI,	LT,	LV,	FI,	RO,	MK,	CY,	AL,	TR,	BG,	CZ,	EE,	SK		
U	S 2003	0879	69	A:	1	2003	0508		US	5.20	01-9	0955	5	2001	0720		
U	S 6656	977		B	2	2003	1202										
BI	R 2002	0026	90	Α		2003	0513		BF	20	02-2	690		20020	0715		
A.	T 3071	82		E		2005	1115		A7	20	02-1	5652		20020	0716		
Cl	N 1398	3657		Α		2003	0226		Cl	1 20	02-1	2651	6	20020	0719		
JI	P 2003	0800	06	A	2	2003	0318		JI	20	02-2	1040	3	20020	0719		
PRAI US GI	S 2001	-909	555	200	0107	20											
<u> </u>																	

$$R_2N - \left\{ \begin{array}{c} (CH_2) n - N - \left\{ \begin{array}{c} (CH_2) m - N - CH_2CHCH_2O - R \\ 1 \\ R \end{array} \right\} \\ R = 0H \end{array}$$

AB The foaming of an aqueous composition or an industrial process is controlled by the

Ι

incorporation of a foam controlling agent having the general formula (I), where n and m are 2 or 3, x is 1-6, R is hydrogen or -CH2-CH(OH)-CH2-O-R', and R' is a C4-C22-alkyl group, the compound I being capable of generating an initial foam height at least 30% less than a 0.1% aqueous solution of dioctyl

sodium sulfosuccinate (DOSS) when added at 0.1% to the DOSS solution. The alkyl glycidyl ether-capped polyamine antifoaming agents can be used in water-thinned coating compns., inks, agricultural or adhesive compns., or in pulp and paper processing, wastewater treatment, textile dyeing and petroleum gas scrubbing. Thus, 1:1 adduct of diethylenetriamine and Bu glycidyl ether (BGE) was produced by adding one equivalent of BGE to diethylenetriamine at a rate allowing to keep the reaction mixture temperature between 90 and 120°, followed by heating the mixture at 100° for 40 min.

ST nonpolymeric polyamine alkyl glycidyl ether deriv antifoaming agent prodn

IT Ethers, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(glycidyl, C12-C16-alkyl, reaction products with nonpolymeric polyamines; production of alkyl glycidyl ether-capped polyamine antifoaming agents)

IT Wetting agents

(nonionic; production of alkyl glycidyl ether-capped polyamines suitable for use as)

IT Amines, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or

engineered material use); PREP (Preparation); USES (Uses) (polyamines, nonpolymeric, reaction products with alkyl glycidyl ethers; production of alkyl glycidyl ether-capped polyamine antifoaming agents) Antifoaming agents IT Surfactants (production of alkyl glycidyl ether-capped polyamine antifoaming agents) 56-18-8DP, reaction products with alkyl glycidyl ethers 112-24-3DP, ITreaction products with alkyl glycidyl ethers 63888-68-6P 488783-16-0P 488783-17-1P 488783-18-2P 488783-19-3P 488783-20-6P 488783-21-7P 488803-37-8P 490035-26-2P 490035-27-3P 490035-28-4P 490035-29-5P 490035-30-8P 491577-26-5P 491577-27-6P 491577-28-7P 491577-29-8P 491577-30-1P 491577-31-2P 491577-32-3P 491577-33-4P RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (production of alkyl glycidyl ether-capped polyamine antifoaming agents) IT 56-18-8, Di(3-aminopropyl)amine 111-40-0, Diethylenetriamine 112-24-3, 2426-08-6, Epodil 741 2461-15-6, Epodil 746 Ancamine TETA 160338-56-7, Epodil 748 RL: RCT (Reactant); RACT (Reactant or reagent) (production of alkyl glycidyl ether-capped polyamine antifoaming agents) IT 577-11-7, Dioctyl sodium sulfosuccinate RL: TEM (Technical or engineered material use); USES (Uses) (suppression of foam of; production of alkyl glycidyl ether-capped polyamine antifoaming agents) L20 ANSWER 2 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN RN488783-18-2 REGISTRY ED Entered STN: 12 Feb 2003 CN 5,22-Dioxa-9,12,15,18-tetraazahexacosane-7,20-diol, 9,12,15,18-tetrakis(3butoxy-2-hydroxypropyl)- (9CI) (CA INDEX NAME) MF C48 H102 N4 O12 SR LC STN Files: CA, CAPLUS, USPAT2, USPATFULL DT.CA CAplus document type: Patent Roles from patents: PREP (Preparation); PRP (Properties); USES (Uses)

Predicted Properties (PPROP)

PROPERTY (CODE)	VALUE	CONDITION	NOTE
Bioconc. Factor (BCF)	22.22 66.66 131.49 393.39 947.18 11222.53 617989.75 1000000.0 1000000.0 1000000.0 899.0+/-65.0 deg C 1.059+/-0.06 g/cm**3 148.39+/-6.0 kJ/mol 497.5+/-34.3 deg C 57 16 6	PH 1 25 deg C PH 2 25 deg C PH 3 25 deg C PH 4 25 deg C PH 5 25 deg C PH 6 25 deg C PH 7 25 deg C PH 8 25 deg C PH 9 25 deg C PH 10 25 deg C PH 10 25 deg C PH 10 760 Torr 7	(1) (1)
Koc (KOC) Coc (KOC) Coc (KOC) Coc (COC) Coc (C	7.54 22.62 44.62 133.48 321.38 3807.86 209686.92 2210920.00 3759676.50 4000701.25 3.88 4.36 4.66 5.13 5.51 6.59 8.33 9.35 9.58 9.61 9.613+/-0.718 0.021 g/L	pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C 25 deg C 25 deg C 25 deg C 25 deg C	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Mass Solubility (SLB.MASS)	1000 g/L 1000 g/L 1000 g/L 630 g/L 250 g/L 17 g/L 0.29 g/L 0.027 g/L 0.016 g/L 0.015 g/L 0.018 g/L	pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C Unbuffered Water pH 8.55	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)

```
|25 deg C
Molar Intrinsic Solubility
                               0.000023 mol/L
                                                      25 deg C
                                                                         (1)
 (ISLB.MOL)
Molar Solubility (SLB.MOL)
                               1.08 mol/L
                                                      pH 1
                                                             25 deg C
                                                                         (1)
Molar Solubility (SLB.MOL)
                               1.08 mol/L
                                                      pH 2
                                                            25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               1.08 mol/L
                                                      pH 3
                                                            25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.68 mol/L
                                                      pH 4
                                                             25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.27 mol/L
                                                      pH 5
                                                            25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.018 mol/L
                                                      pH 6
                                                            25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.00031 mol/L
                                                      pH 7
                                                             25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.000029 mol/L
                                                      pH 8
                                                            25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.000017 mol/L
                                                      pH 9
                                                            25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.000016 mol/L
                                                      pH 10 25 deg C
                                                                        (1)
Molar Solubility (SLB.MOL)
                               0.000019 mol/L
                                                      Unbuffered Water (1)
                                                      pH 8.55
                                                      25 deg C
Molar Volume (MVOL)
                               875.3+/-3.0 cm**3/mol 20 deg C
                                                                        (1)
                                                      760 Torr
Molecular Weight (MW)
                               927.34
                                                                        (1)
pKa (PKA)
                               13.36+/-0.20
                                                      Most Acidic
                                                                        (1)
                                                      25 deg C
pKa (PKA)
                               7.74+/-0.50
                                                      Most Basic
                                                                        (1)
                                                      25 deg C
Polar Surface Area (PSA)
                               189.72 A**2
                                                                        (1)
Vapor Pressure (VP)
                              0 Torr
                                                      |25 deg C
                                                                        (1)
```

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.19 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

```
AN 138:124243 CA
```

- TI Production of alkyl glycidyl ether-capped polyamine antifoaming agents
- IN Sassano, Slone Caroline; Lassila, Kevin Rodney
- PA Air Products and Chemicals, Inc., USA
- SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C11D003-00

ICS C11D003-37

CC 46-4 (Surface Active Agents and Detergents)

FAN.CNT 1

	PATENT NO.	KIND DATE	APPLICATION NO.	DATE
PI	EP 1277829	A2 20030122	EP 2002-15652	20020716
	EP 1277829	A3 20030502	•	
	EP 1277829	B1 20051019		
	R: AT, BE,	CH, DE, DK, ES,	FR, GB, GR, IT, LI, LU,	NL, SE, MC, PT,
	IE, SI,	LT, LV, FI, RO,	MK, CY, AL, TR, BG, CZ,	EE, SK
	US 2003087969	A1 20030508	US 2001-909555	20010720
	US 6656977	B2 20031202		
	BR 2002002690	A 20030513	BR 2002-2690	20020715
	AT 307182	E 20051115	AT 2002-15652	20020716
	CN 1398657	A 20030226	CN 2002-126516	20020719

JP 2003080006 A2 20030318 PRAI US 2001-909555 20010720 JP 2002-210403 20020719

G

$$\begin{array}{c|c} R_2N - \left[& (CH_2)n - N - \left[& (CH_2)m - N - CH_2CHCH_2O - R \right] \\ & R & R & OH & I \end{array} \right]$$

AB The foaming of an aqueous composition or an industrial process is controlled by the

incorporation of a foam controlling agent having the general formula (I), where n and m are 2 or 3, x is 1-6, R is hydrogen or -CH2-CH(OH)-CH2-O-R', and R' is a C4-C22-alkyl group, the compound I being capable of generating an initial foam height at least 30% less than a 0.1% aqueous solution of dioctyl

sodium sulfosuccinate (DOSS) when added at 0.1% to the DOSS solution The alkyl glycidyl ether-capped polyamine antifoaming agents can be used in water-thinned coating compns., inks, agricultural or adhesive compns., or in pulp and paper processing, wastewater treatment, textile dyeing and petroleum gas scrubbing. Thus, 1:1 adduct of diethylenetriamine and Bu glycidyl ether (BGE) was produced by adding one equivalent of BGE to diethylenetriamine at a rate allowing to keep the reaction mixture temperature between 90 and 120°, followed by heating the mixture at 100° for 40 min.

ST nonpolymeric polyamine alkyl glycidyl ether deriv antifoaming agent prodn

IT Ethers, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(glycidyl, C12-C16-alkyl, reaction products with nonpolymeric polyamines; production of alkyl glycidyl ether-capped polyamine antifoaming agents)

IT Wetting agents

(nonionic; production of alkyl glycidyl ether-capped polyamines suitable for use as)

IT Amines, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polyamines, nonpolymeric, reaction products with alkyl glycidyl ethers; production of alkyl glycidyl ether-capped polyamine antifoaming agents)

IT Antifoaming agents

Surfactants

(production of alkyl glycidyl ether-capped polyamine antifoaming agents) TI 56-18-8DP, reaction products with alkyl glycidyl ethers 112-24-3DP, reaction products with alkyl glycidyl ethers 63888-68-6P 488783-16-0P 488783-17-1P 488783-18-2P 488783-19-3P 488783-20-6P 488783-21-7P 488803-37-8P 490035-26-2P 490035-27-3P 490035-28-4P 490035-29-5P 490035-30-8P 491577-26-5P 491577-27-6P 491577-28-7P 491577-29-8P 491577-30-1P 491577-31-2P 491577-32-3P 491577-33-4P RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(production of alkyl glycidyl ether-capped polyamine antifoaming agents)

IT 56-18-8, Di(3-aminopropyl)amine 111-40-0, Diethylenetriamine 112-24-3,

Ancamine TETA 2426-08-6, Epodil 741 2461-15-6, Epodil 746 160338-56-

7, Epodil 748

RL: RCT (Reactant); RACT (Reactant or reagent) (production of alkyl glycidyl ether-capped polyamine antifoaming agents) IT 577-11-7, Dioctyl sodium sulfosuccinate RL: TEM (Technical or engineered material use); USES (Uses) (suppression of foam of; production of alkyl glycidyl ether-capped polyamine antifoaming agents) L20 ANSWER 3 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN 264627-16-9 REGISTRY RNED Entered STN: 12 May 2000 CN 2,7,26,31-Tetraoxa-11,14,17,20,23-pentaazadotriacontane-9,25-diol, 11,14,17,20,23-pentakis[2-hydroxy-3-[4-(oxiranylmethoxy)butoxy]propyl]-1,32-bis(oxiranyl) - (9CI) (CA INDEX NAME) MF C78 H149 N5 O28 SR CA LCSTN Files: CA, CAPLUS, USPATFULL DT.CA CAplus document type: Patent RLD.P Roles for non-specific derivatives from patents: PREP (Preparation)

Ring System Data

Elemental	Elemental	Size of	Ring System	Ring	RID
Analysis	Sequence	the Rings	Formula	Identifier	Occurrence
EA	ES	SZ	RF	RID	Count
========	+=======	+=======	+==== == ====	+========	+=======
C20	OC2	3	C20	1.30.1	7

PAGE 1-A

PAGE 2-B

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Predicted Properties (PPROP)

PROPERTY (CODE)	VALUE	CONDITION	NOTE
Bioconc. Factor (BCF)	1.0 1.0 1.0 1.0 1.0 1.0 1.0 22.44 140.47 168.24 171.06 1273.1+/-65.0 deg C 1.199+/-0.06 g/cm**3 214.58+/-6.0 kJ/mol 723.7+/-34.3 deg C 96 33 7	PH 1 25 deg C PH 2 25 deg C PH 3 25 deg C PH 4 25 deg C PH 5 25 deg C PH 6 25 deg C PH 7 25 deg C PH 8 25 deg C PH 9 25 deg C PH 10 25 deg C PH 10 25 deg C PH 10 760 Torr 7	(1)
Hydrogen Donors/Acceptors Sum	40		(1)

(UDAC)	1	F	1
(HDAS) Koc (KOC)	1.0	DU 1 DE dog C	(1)
Koc (KOC)	11.0	pH 1 25 deg C	(1)
Koc (KOC)	11.0	pH 2 25 deg C	(1)
Koc (KOC)	11.0	pH 3 25 deg C	(1)
Koc (KOC)	!	pH 4 25 deg C	(1)
Koc (KOC)	1.0	pH 5 25 deg C	(1)
	1.0	pH 6 25 deg C	(1)
Koc (KOC)	180.93	pH 7 25 deg C	(1)
Koc (KOC)	1132.38	pH 8 25 deg C	(1)
Koc (KOC)	1356.25	pH 9 25 deg C	(1)
Koc (KOC)	1379.04	pH 10 25 deg C	(1)
logD (LOGD)	-3.49	pH 1 25 deg C	(1)
logD (LOGD)	-2.39	pH 2 25 deg C	(1)
logD (LOGD)	-1.91	pH 3 25 deg C	(1)
logD (LOGD)	-1.85	pH 4 25 deg C	(1)
logD (LOGD)	-1.74	pH 5 25 deg C	[(1)
logD (LOGD)	0.02	pH 6 25 deg C	(1)
logD (LOGD)	2.36	pH 7 25 deg C	(1)
logD (LOGD)	3.16	pH 8 25 deg C	(1)
logD (LOGD)	3.23	pH 9 25 deg C	(1)
logD (LOGD)	3.24	pH 10 25 deg C	(1)
logP (LOGP)	3.243+/-0.998	25 deg C	(1)
Mass Intrinsic Solubility	1000 g/L	.25 deg C	(1)
(ISLB.MASS)		•	[
Mass Solubility (SLB.MASS)	1000 g/L	pH 1 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 2 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 3 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 4 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 5 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 6 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 7 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 8 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 9 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 10 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	Unbuffered Water	
	,	рн 10.39	` ′
		25 deg C	
Molar Intrinsic Solubility	0.62 mol/L	25 deg C	(1)
(ISLB.MOL)			, -,
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 1 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 2 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 3 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 4 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 5 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 6 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 7 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 8 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 9 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	pH 10 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.62 mol/L	Unbuffered Water	(1)
(0220002,	1010201, 2	pH 10.39	(1)
		25 deg C	
Molar Volume (MVOL)	1337.6+/-3.0 cm**3/mol		(1)
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	===,	760 Torr	(-)
Molecular Weight (MW)	1605.03	, 50 1011	(1)
pKa (PKA)	13.23+/-0.20	Most Acidic	(1)
· · · · · · · · · · · · · · · · · · ·		25 deg C	(1)
pKa (PKA)	7.57+/-0.50	Most Basic	(1)
· · · · · · · · · · · · · · · · · · ·	1	25 deg C	(1)
Polar Surface Area (PSA)	351.64 A**2	23 469 6	(1)
(2007)	, ·	ı	(+ /

IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG US 6288208 B1 20010911 US 1999-295320 19990420 CA 2347200 AA20000420 CA 1999-2347200 19991013 AU 9961196 AU 1999-61196 EP 1999-947835 A1 20000501 19991013 EP 1121386 **A1** 20010808 19991013 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO JP 2002527555 T2 JP 2000-575930 19991013 20020827 PRAI IL 1998-126565 19981014 WO 1999-IL540 19991013

AB The present invention relates to a highly branched polyamide oligomer R[NR1R2]mNR12 (m = 1-5; R = various monovalent groups or epoxy-amide polymers; R2 = linear or branched alkylene, etc.), to the process for preparing such branched oligomers and to different uses thereof. The polyamide oligomers may be used, for example, as epoxy hardeners in the preparation of thermosetting compns., as thermoplastic hot melt adhesives, as adhesion promoters and many other suitable applications.

ST polyamine polyamide branched hardener epoxy

IT Synthetic rubber, uses

RL: NUU (Other use, unclassified); USES (Uses)
(butadiene-isoprene, epoxyurethane-terminated; highly branched oligoamides, their preparation and use as epoxy hardeners)

IT Polyamides, preparation

```
Polyamides, preparation
    RL: IMF (Industrial manufacture); PREP (Preparation)
        (dendrimers; highly branched oligoamides, their preparation and use as epoxy
       hardeners)
IT
    Polyamines
    Polyamines
    Polyamines
    RL: IMF (Industrial manufacture); TEM (Technical or engineered material
    use); PREP (Preparation); USES (Uses)
        (epoxy-polyamide-; highly branched oligoamides, their preparation and use as
        epoxy hardeners)
    Polyamides, uses
TT
    Polyamides, uses
    Polyamides, uses
    RL: IMF (Industrial manufacture); TEM (Technical or engineered material
    use); PREP (Preparation); USES (Uses)
        (epoxy-polyamine-; highly branched oligoamides, their preparation and use as
        epoxy hardeners)
IT
    Crosslinking agents
        (for epoxy resins; highly branched oligoamides, their preparation and use as
        epoxy hardeners)
IT
    Epoxy resins, uses
    RL: NUU (Other use, unclassified); USES (Uses)
        (hardeners for; highly branched oligoamides, their preparation and use as
        epoxy hardeners)
IT
    Coating materials
        (highly branched oligoamides, their preparation and use as epoxy hardeners)
IT
    Castor oil
    RL: IMF (Industrial manufacture); PREP (Preparation)
        (methanolysis products, reaction products with salicylic acid, reaction
       products with diethylentriamine, dendripolyamides; highly branched
       oligoamides, their preparation and use as epoxy hardeners)
ΙT
    Sunflower oil
    RL: IMF (Industrial manufacture); PREP (Preparation)
        (methanolysis products, reaction products with terephthalic acid,
       reaction products with triethylenetetramine, dendripolyamides; highly
       branched oligoamides, their preparation and use as epoxy hardeners)
IT
    Epoxy resins, uses
    Epoxy resins, uses
    Epoxy resins, uses
    RL: IMF (Industrial manufacture); TEM (Technical or engineered material
    use); PREP (Preparation); USES (Uses)
        (polyamide-polyamine-; highly branched oligoamides, their preparation and
       use as epoxy hardeners)
ΙT
    Dendritic polymers
    Dendritic polymers
    RL: IMF (Industrial manufacture); PREP (Preparation)
        (polyamides; highly branched oligoamides, their preparation and use as epoxy
       hardeners)
    69-72-7DP, Salicylic acid, reaction products with castor oil methanolysis
IT
    products, reaction products with diethylentriamine, dendripolyamides
    100-21-0DP, Terephthalic acid, reaction products with sunflower oil
    methanolysis products, reaction products with triethylene tetramine,
                       111-20-6DP, Sebacic acid, reaction products with bean
    dendripolyamides
    oil methanolysis products, reaction products with triethylene tetramine,
                       111-40-0DP, Diethylenetriamine, reaction products with
    dendripolyamides
    oil-acid adducts, dendripolyamides 112-24-3DP, Triethylene tetramine,
    reaction products with oil-acid adducts, dendripolyamides
                                                                 112-57-2DP,
    Tetra-ethylenepentamine, reaction products with oil-acid adducts,
    dendripolyamides
                       124-04-9DP, Adipic acid, reaction products with bean
```

IT

IT

IT

L20

RN

ED

CN

ΜF

SR

LC

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oil methanolysis products, reaction products with tetraethylenepentamine,
     dendripolyamides 124-09-4DP, Hexamethylenediamine, adduct with Epon 834,
     reaction products with polyamides, dendripolyamides
                                                          826-62-0DP, reaction
     products with polyamide cross linking agent 2994-63-0DP, reaction
     products with polyamides, dendripolyamides, dendripolyamides
     3878-43-1DP, reaction products with polyamide-polyamines, dendripolyamides
     12624-35-0DP, dendripolyamides
                                     16096-31-4DP, 1,6-Hexanediol diglycidyl
     ether, reaction products with polyamide-polyamines, dendripolyamides
     25068-38-6DP, Epon 834, adduct with hexamethylenediamine, reaction
     products with polyamides, dendripolyamides
                                                26590-20-5DP,
     Methyltetrahydrophthalic anhydride, reaction products with
     polyamide-polyamines, polydendrimers
                                           38294-64-3DP, dendripolyamides
     56727-50-5DP, dendripolyamides
                                     136601-29-1DP, Araldite HY 825, reaction
     products with epoxy resins, dendripolyamides
                                                  145249-58-7DP,
     dendripolyamides
                        264627-13-6DP, dendripolyamides
                                                          264627-14-7DP,
     dendripolyamides
                        264627-15-8DP, dendripolyamides
                                                          264627-16-9DP,
     dendripolyamides
                        264627-17-0DP, dendripolyamides
                                                          264627-18-1DP,
     dendripolyamides
                        264627-19-2DP, dendripolyamides
                                                          264878-36-6DP,
     dendripolyamides
     RL: IMF (Industrial manufacture); PREP (Preparation)
        (highly branched oligoamides, their preparation and use as epoxy hardeners)
     25610-21-3DP, Diethylene glycol sebacic acid copolymer, reaction products
                     25667-63-4DP, Diethylene glycol sebacic acid copolymer,
     sru, reaction products with Epon 828
     RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
     (Preparation); USES (Uses)
        (highly branched oligoamides, their preparation and use as epoxy hardeners)
     25068-38-6, Epon 828
                          26142-30-3, Poly (propyleneglycol) diglycidyl ether
                             264884-14-2, ELP 812
        68665-19-0, UP-650D
     RL: NUU (Other use, unclassified); USES (Uses)
        (highly branched oligoamides, their preparation and use as epoxy hardeners)
     101-90-6, Resorcinol diglycidyl ether 107-15-3, 1,2-Ethanediamine,
                 108-45-2, 1,3-Benzenediamine, reactions 539-48-0,
     p-Xylylenediamine 826-62-0, 5-Norbornene-2,3-dicarboxylic acid anhydride
                    2425-79-8, 1,4-Butanediol diglycidyl ether
        1675-54-3
                                                                 2855-13-2,
     Isophoronediamine
                         3072-84-2
                                    3114-70-3, 1,4-Cyclohexanediamine
     3312-60-5, N-Cyclohexyl-1,3-propanediamine 4403-71-8, 4-Aminobenzylamine
        9046-10-0, Poly(propylene glycol)bis(2-aminopropyl)ether
                                                                  15336-81-9
                  22338-32-5
                              136601-29-1, Araldite HY 825
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (highly branched oligoamides, their preparation and use as epoxy hardeners)
RE.CNT 4
              THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
(1) Allied-Signal; WO 9317062 A 1993 CAPLUS
(2) Renfrew; US 2705223 A 1995 CAPLUS
(3) Sayed-Sweet, Y; JOURNAL OF MATERIALS CHEMISTRY 1997, V7(7) CAPLUS
(4) Waddill; US 4421906 A 1983 CAPLUS
    ANSWER 4 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN
     253433-70-4 REGISTRY
     Entered STN: 25 Jan 2000
     2-Propenoic acid, 2-methyl-, 1,2-ethanediylbis[[[2-hydroxy-3-[(2-methyl-1-
     oxo-2-propenyl)oxy]propyl]imino]-2,1-ethanediylnitrilobis(2-hydroxy-3,1-
    propanediyl)] ester (9CI) (CA INDEX NAME)
     C48 H78 N4 O18
    CA
    STN Files:
                 CA, CAPLUS
DT.CA Caplus document type: Patent
      Roles from patents: USES (Uses)
```

PAGE 1-B

Predicted Properties (PPROP)

PROPERTY (CODE)	VALUE	CONDITION	NOTE
Bioconc. Factor (BCF)		+====================================	+==== (1)
Bioconc. Factor (BCF)	3.54	! -	
		pH 2 25 deg C	(1)
Bioconc. Factor (BCF)	8.10	pH 3 25 deg C	(1)
Bioconc. Factor (BCF)	25.58	pH 4 25 deg C	(1)
Bioconc. Factor (BCF)	90.16	pH 5 25 deg C	(1)
Bioconc. Factor (BCF)	4042.20	pH 6 25 deg C	(1)
Bioconc. Factor (BCF)	116891.10	pH 7 25 deg C	(1)
Bioconc. Factor (BCF)	412375.22	pH 8 25 deg C	(1)
Bioconc. Factor (BCF)	501526.66	pH 9 25 deg C	į (1)
Bioconc. Factor (BCF)	510982.44	pH 10 25 deg C	(1)
Boiling Point (BP)	983.8+/-65.0 deg C	760 Torr	(1)
Density (DEN)	1.207+/-0.06 g/cm**3	760 Torr	(1)
Enthalpy of Vap. (HVAP)	162.54+/-6.0 kJ/mol	760 Torr	(1)
Flash Point (FP)	548.8+/-34.3 deg C		(1)
Freely Rotatable Bonds (FRB)	51		(1)
H acceptors (HAC)	22		(1)
H donors (HD)	6		
· ·	~		(1)
Hydrogen Donors/Acceptors Sum (HDAS)	28		(1)
Koc (KOC)	1.06	pH 1 25 deg C	(1)

Koc (KOC)	2.94	pH 2 25 deg C	(1)
			!
Koc (KOC)	6.71	pH 3 25 deg C	(1)
Koc (KOC)	21.19	pH 4 25 deg C	(1)
Koc (KOC)	74.71	pH 5 25 deg C	(1)
Koc (KOC)	3349.50	pH 6 25 deg C	(1)
	!		1
Koc (KOC)	96860.02	pH 7 25 deg C	(1)
Koc (KOC)	341708.41	pH 8 25 deg C	(1)
Koc (KOC)	415582.38	pH 9 25 deg C	(1)
Koc (KOC)	423417.75	-	:
·	!	pH 10 25 deg C	(1)
logD (LOGD)	2.21	pH 1 25 deg C	(1)
logD (LOGD)	2.66	pH 2 25 deg C	(1)
logD (LOGD)	3.01	рн 3 25 deg C	(1)
logD (LOGD)	3.51		:
	!	pH 4 25 deg C	(1)
logD (LOGD)	4.06	pH 5 25 deg C	(1)
logD (LOGD)	5.71	pH 6 25 deg C	(1)
logD (LOGD)	7.17	pH 7 25 deg C	(1)
logD (LOGD)	7.72		
-	!	pH 8 25 deg C	(1)
logD (LOGD)	7.81	pH 9 25 deg C	(1)
logD (LOGD)	7.81	pH 10 25 deg C	(1)
logP (LOGP)	7.818+/-0.849	25 deg C	(1)
Mass Intrinsic Solubility	0.012 g/L		
	0.012 g/L	25 deg C	(1)
(ISLB.MASS)			
Mass Solubility (SLB.MASS)	999 g/L	pH 1 25 deg C	(1)
Mass Solubility (SLB.MASS)	999 g/L	pH 2 25 deg C	(1)
Mass Solubility (SLB.MASS)	770 g/L	-	:
		pH 3 25 deg C	(1)
Mass Solubility (SLB.MASS)	240 g/L	pH 4 25 deg C	(1)
Mass Solubility (SLB.MASS)	68 g/L	pH 5 25 deg C	(1)
Mass Solubility (SLB.MASS)	1.5 g/L	pH 6 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.052 g/L	- -	
		-	(1)
Mass Solubility (SLB.MASS)	0.015 g/L	pH 8 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.012 g/L	pH 9 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.012 g/L	pH 10 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.013 g/L		
nabb botability (bbb.MASS)	0.013 9/1	Unbuffered Water	(1)
	!	pH 8.23	ļ
		25 deg C	
Molar Intrinsic Solubility	0.000012 mol/L	25 deg C	(1)
(ISLB.MOL)	<u>'</u>	i	i ` ′
Molar Solubility (SLB.MOL)	11 00 mol/I	NU 1 25 doc 0	/3.
Molar Solubility (SIB.MOL)	1.00 mol/L	pH 1 25 deg C	(1)
Molar Solubility (SLB.MOL)	1.00 mol/L	pH 2 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.77 mol/L	pH 3 25 deq C	(1)
Molar Solubility (SLB.MOL)	0.24 mol/L	pH 4 25 deg C	(1)
Molar Solubility (SLB.MOL)	1		
Molar Colubility (CLD MOL)			(1)
Molar Solubility (SLB.MOL)	0.0015 mol/L	рн 6 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000052 mol/L	pH 7 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000015 mol/L	pH 8 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000012 mol/L	pH 9 25 deg C	:
	!		(1)
Molar Solubility (SLB.MOL)	0.000012 mol/L	pH 10 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000013 mol/L	Unbuffered Water	(1)
		рн 8.23	ĺ
	i	25 deg C	
Molar Volume (MVOL)	007 4. / 2 0+2 /1		(-)
MOTAL VOLUME (MVOL)	827.4+/-3.0 cm**3/mol	, –	(1)
		760 Torr	
Molecular Weight (MW)	999.15		(1)
pKa (PKA)	12.76+/-0.20	Most Acidic	(1)
	120.701, 0.20	1	(1)
-Wa (DWA)	/	25 deg C	
pKa (PKA)	7.16+/-0.50	Most Basic	(1)
		25 deg C	
Polar Surface Area (PSA)	292.14 A**2	İ	(1)
Vapor Pressure (VP)	0 Torr	25 deg C	
-apor ricobate (VF)	10 1011	125 deg C	(1)

Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.14 (1)((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

- AN132:71495 CA
- photosensitive paste and manufacture of plasma display panel material ΤI
- IN Kusano, kazutaka; Ikeda, Norimasa; Horiuchi, Takeshi
- PΑ Toray Industries, Inc., Japan
- SO Jpn. Kokai Tokkyo Koho, 11 pp.
- CODEN: JKXXAF
- DT Patent
- LA Japanese IC
 - ICM G03F007-004

ICS G03F007-004; C03C008-14; H01J009-02; H01J011-02

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35

FAN.CNT 1

PΤ

PATENT NO. KIND DATE APPLICATION NO. DATE -----JP 2000010268 A2 20000114 JP 1999-102315 19990409

PRAI JP 1998-110406 19980421

- The paste contains inorg. particles and a photosensitive paste containing photosensitive organic compound R1R3NLNR2R4 (R1-2 = substituent having ethylenic unsatd. group; R3-4 = substituent having ethylenic unsatd. group, H, C1-20 alkyl, aryl, aralkyl; L = divalent linkage). The plasma display panel is manufactured by (1) coating the photosensitive paste on a substrate and drying, (2) patterning the composition by photolithog., and (3) firing the patterns for barrier rib formation. Patterns with high aspect ratio and accuracy are obtained.
- ST photosensitive paste unsatd amine compd; plasma display panel barrier rib formation
- ITAluminoborosilicate glasses

RL: DEV (Device component use); USES (Uses)

(barium lithium magnesium zinc aluminoborosilicate; photosensitive paste containing unsatd. amine compound and inorg. particles for manufacture of

plasma display panel) .

IT Plasma display panels

> (photosensitive paste containing unsatd. amine compound and inorg. particles for manufacture of plasma display panel)

IT 6197-30-4, 2-Ethylhexyl-2-cyano-3,3-diphenyl acrylate

RL: DEV (Device component use); MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(UV absorbent; photosensitive paste containing unsatd. amine compound and inorg. particles for manufacture of plasma display panel)

IT 35074-77-2

> RL: DEV (Device component use); MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(antioxidant; photosensitive paste containing unsatd. amine compound and inorg. particles for manufacture of plasma display panel)

TT 70701-24-5 83372-16-1 253433-68-0 253433-69-1 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(photosensitive paste containing unsatd. amine compound and inorg. particles for manufacture of plasma display panel)

IT 106-91-2, Glycidyl methacrylate 107-15-3, 1,2-Ethanediamine, reactions RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of unsatd. amine compound)

L20 ANSWER 5 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN

RN 173328-48-8 REGISTRY

ED Entered STN: 22 Feb 1996

CN L-Alaninamide, N-[3-[4-(2,3-dihydroxypropoxy)butoxy]-2-hydroxypropyl]-L-alanyl-L-alanyl-N-(4-nitrophenyl)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C25 H41 N5 O10

CI COM

SR CA

Ring System Data

			Ring System		RID
Analysis	Sequence	the Rings	Formula	Identifier	Occurrence
EA	ES	SZ	RF	RID	Count
========	+=======	+=======	+=========	}=========	+========
C6	C6	6	C6	46.150.18	11

Absolute stereochemistry.

PAGE 1-B

Predicted Properties (PPROP)

PROPERTY (CODE) | VALUE | CONDITION | NOTE

=======================================	+============	+======================================	-===
Bioconc. Factor (BCF)	1.0	pH 1 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 2 25 deg C	(1)
Bioconc. Factor (BCF)	11.0	pH 3 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 4 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 5 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 6 25 deg C	(1)
Bioconc. Factor (BCF)	11.0	pH 7 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 8 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	:	
Bioconc. Factor (BCF)	11.0	pH 9 25 deg C pH 10 25 deg C	(1) (1)
Boiling Point (BP)	917.8+/-65.0 deg C	760 Torr	(1)
Density (DEN)	1.290+/-0.06 g/cm**3	760 TOTT	(1)
Enthalpy of Vap. (HVAP)	139.82+/-3.0 kJ/mol	760 TOTT	
Flash Point (FP)	508.9+/-34.3 deg C	760 1011	(1)
Freely Rotatable Bonds (FRB)	23	1	(1)
H acceptors (HAC)	15		(1)
H donors (HD)	7		(1)
Hydrogen Donors/Acceptors Sum	• *	1	(1)
(HDAS)	22	1	(1)
Koc (KOC)	1.0	pH 1 25 deg C	(1)
Koc (KOC)	1.0	pH 2 25 deg C	(1)
Koc (KOC)	1.0	pH 3 25 deg C	(1)
Koc (KOC)	1.0	pH 4 25 deg C	(1)
Koc (KOC)	1.0	pH 5 25 deg C	(1)
Koc (KOC)	6.88	pH 6 25 deg C	(1)
Koc (KOC)	20.79	pH 7 25 deg C	(1)
Koc (KOC)	26.08	pH 8 25 deg C	(1)
Koc (KOC)	26.74	pH 9 25 deg C	(1)
Koc (KOC)	26.58	pH 10 25 deg C	(1)
logD (LOGD)	-3.01	pH 1 25 deg C	(1)
logD (LOGD)	-2.99	pH 2 25 deg C	(1)
logD (LOGD)	-2.85	pH 3 25 deg C	(1)
logD (LOGD)	-2.28		(1)
logD (LOGD)	-1.37	pH 5 25 deg C	(1)
logD (LOGD)	-0.50	pH 6 25 deg C	(1)
logD (LOGD)	-0.02	pH 7 25 deg C	(1)
logD (LOGD)	0.08		(1)
logD (LOGD)	0.09	pH 9 25 deg C	(1)
logD (LOGD)	0.09		(1)
logP (LOGP)	0.096+/-0.872	25 deg C	(1)
Mass Intrinsic Solubility	0.20 g/L	25 deg C	(1)
(ISLB.MASS)			
Mass Solubility (SLB.MASS)	250 g/L	pH 1 25 deg C	(1)
Mass Solubility (SLB.MASS)	240 g/L		(1)
Mass Solubility (SLB.MASS)	180 g/L		(1)
Mass Solubility (SLB.MASS)	47 g/L	pH 4 25 deg C	(1)
Mass Solubility (SLB.MASS)	5.7 g/L		(1)
Mass Solubility (SLB.MASS)	0.80 g/L	pH 6 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.26 g/L	pH 7 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.21 g/L		(1)
Mass Solubility (SLB.MASS)	0.20 g/L		(1)
Mass Solubility (SLB.MASS)	0.20 g/L		(1)
Mass Solubility (SLB.MASS)	0.20 g/L	Unbuffered Water	(1)
		рн 8.50	
		25 deg C	
Molar Intrinsic Solubility	0.00035 mol/L	25 deg C	(1)
(ISLB.MOL)			
Molar Solubility (SLB.MOL)	0.44 mol/L		(1)
Molar Solubility (SLB.MOL)	0.42 mol/L	pH 2 25 deg C	(1)

```
Molar Solubility (SLB.MOL)
                               0.31 mol/L
                                                       pH 3
                                                              25 deg C
Molar Solubility (SLB.MOL)
                                0.083 mol/L
                                                       pH 4
                                                              25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                                0.010 mol/L
                                                       pH 5
                                                              25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                                0.0014 \text{ mol/L}
                                                       pH 6
                                                              25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                                0.00045 mol/L
                                                       pH 7
                                                              25 deq C
                                                                           (1)
Molar Solubility (SLB.MOL)
                                0.00036 mol/L
                                                       pH 8
                                                              25 deg C
                                                                           (1)
Molar Solubility (SLB.MOL)
                                                        pH 9 25 deq C
                                0.00035 \text{ mol/L}
                                                                           (1)
Molar Solubility (SLB.MOL)
                                0.00035 mol/L
                                                        pH 10 25 deg C
                                                                           (1)
Molar Solubility (SLB.MOL)
                                0.00035 \text{ mol/L}
                                                        Unbuffered Water (1)
                                                        pH 8.50
                                                        25 deg C
Molar Volume (MVOL)
                                442.7+/-3.0 cm**3/mol|20 deg C
                                                                           (1)
                                                        760 Torr
Molecular Weight (MW)
                                571.62
                                                                           (1)
pKa (PKA)
                                12.47+/-0.70
                                                        Most Acidic
                                                                           (1)
                                                        25 deg C
pKa (PKA)
                                6.46+/-0.38
                                                        Most Basic
                                                                          (1)
                                                        25 deg C
Polar Surface Area (PSA)
                                195.55 A**2
                                                                          (1)
Vapor Pressure (VP)
                                                       25 deg C
                               0 Torr
                                                                          (1)
```

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.19 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

```
L20 ANSWER 6 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN
```

RN 74029-26-8 REGISTRY

ED Entered STN: 16 Nov 1984

CN Sepharose CL 4B, (14S,17S,20S)-2,11-dihydroxy-14,17,20-trimethyl-21-[(4-nitrophenyl)amino]-15,18,21-trioxo-4,9-dioxa-13,16,19-triazaheneicos-1-ylether (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C25 H41 N5 O10 . x Unspecified

LC STN Files: CA, CAPLUS

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: BIOL (Biological study)

Ring System Data

Elemental	Elemental	Size of	Ring System	Ring	RID
			Formula	Identifier	Occurrence
EA	ES	SZ	RF	RID	Count
========	+=======- ac	-=======-	-=====================================	+========	+========
C6	C6	6	C6	46.150.18	l in CM
					1

CM 1

CRN 173328-48-8 CMF C25 H41 N5 O10

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B

ОН

CM 2

CRN 62610-50-8 CMF Unspecified CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN 93:21365 CA

TI One-step purification of human leukocyte elastase by biospecific affinity chromatography at subzero temperatures

AU Andersson, Kristoffer K.; Balny, Claude; Douzou, Pierre; Bieth, Joseph G.

CS INSERM, Montpellier, 34033, Fr.

SO Journal of Chromatography (1980), 192(1), 236-9 CODEN: JOCRAM; ISSN: 0021-9673

DT Journal

LA English

CC 7-2 (Enzymes)

AB Human leukocyte elastase was purified from a crude granule extract by affinity chromatog. on L-trialanine-p-nitroanilide coupled to diglycidyl ether-activated Sepharose 6B CL at subzero temps. (nonturnover conditions). Crude granular extract (100 μL) was mixed with 500 μL of 0.1M NaOAc buffer, pH 5, containing 4M NaCl. The mixture was cooled to -14° and applied to the affinity column at a flow rate of 1 mL/h. After 1 h, in which complete adsorption of enzyme was achieved, impurities were eluted with 20 mL of the same buffer. Elastase was then desorbed with a mixture of equal vols. of ethylene glycol and 0.2M NaOAc buffer (paH 5.0) without NaCl. The elution profile showed a single peak with good coincidence of protein and activity; the activity yield was .apprx.85%.

ST elastase leukocyte purifn affinity chromatog

IT Leukocyte

(elastase of, affinity chromatog. in purification of)

IT 74029-26-8

RL: BIOL (Biological study)

(elastase of leukocyte affinity chromatog. on, at subzero temps.)

IT 9004-06-2P

RL: PREP (Preparation)

(of leukocyte, purification of, affinity chromatog. at low temps. in)

L20 ANSWER 7 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN

RN 69458-28-2 REGISTRY

ED Entered STN: 16 Nov 1984

CN Agarose, 2,11-dihydroxy-14,17,20-trimethyl-21-[(4-nitrophenyl)amino]-15,18,21-trioxo-4,9-dioxa-13,16,19-triazaheneicos-1-yl ether (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C25 H41 N5 O10 . x Unspecified

LC STN Files: CA, CAPLUS

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: BIOL (Biological study)

Ring System Data

Elemental	Elemental	Size of	Ring System	Ring	RID
Analysis	Sequence	the Rings	Formula	Identifier	Occurrence
EA	ES	SZ	RF	RID	Count
C6	+=== === - C6 	+======= 6 		+====== ==============================	-====================================

CM 1

CRN 173328-48-8 CMF C25 H41 N5 O10

Absolute stereochemistry.

PAGE 1-B

ОН

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CM
          2
     CRN
          9012-36-6
     CMF
          Unspecified
     CCI
          PMS, MAN
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
REFERENCE 1
AN
     90:99088 CA
     Affinity chromatography at sub-zero temperatures. A model study with
ΤI
     porcine pancreatic elastase
ΑU
     Balny, Claude; Le Doucen, Christian; Douzou, Pierre
     INSERM, Montpellier, Fr.
CS
     Journal of Chromatography (1979), 168(1), 133-8
SO
     CODEN: JOCRAM; ISSN: 0021-9673
DТ
     Journal
     English
LΑ
     7-2 (Enzymes)
CC
     Section cross-reference(s): 9
AB
     A new variety of affinity chromatog. of enzymes is described which
     consists of building up an affinity adsorbent composed of a real
     substrate. The chromatog. is performed at a sub-zero temperature where the
     turnover of the enzyme is very low or stopped. As a model system
     Sepharose-bound L-trialanine p-nitroanilide was used for the affinity
     binding of porcine pancreatic elastase, which was adsorbed to the column
     in a hypersaline medium at -14° and eluted from the column at the
     same temperature using 50% ethylene glycol. The affinity adsorbent proved to
be
     very specific as it did not retain trypsin, chymotrypsin, and ovalbumin
     and retained only 20% of cytochrome c.
ST
     chromatog affinity adsorbent substrate enzyme; elastase affinity chromatog
TΥ
     Enzymes
     RL: PROC (Process)
        (affinity chromatog. of, on adsorbent containing substrate at sub-zero
        temps.)
IT
     Adsorbents
        (for enzymes, substrate-containing, for low temperature chromatog.)
IT
     Cold, chemical and physical effects
        (on affinity chromatog. of enzyme)
IT
     Chromatography, column and liquid
        (affinity, at sub-zero temps., of enzymes with affinity adsorbent
        substrate)
IT
     9004-06-2
     RL: PROC (Process)
        (affinity chromatog. of, on substrate-containing adsorbent at sub-zero
        temps.)
     69458-28-2
IT
     RL: BIOL (Biological study)
        (elastase affinity chromatog. on, at sub-zero temps.)
IT
     60354-61-2D, reaction products with Sepharose
     RL: BIOL (Biological study)
        (in affinity chromatog. of elastase at sub-zero temps.)
L20
     ANSWER 8 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN
     63888-76-6 REGISTRY
RN
```

ED Entered STN: 16 Nov 1984

CN 9,26-Dioxa-13,16,19,22-tetraazatetratriacontane-11,24-diol, hydrochloride (9CI) (CA INDEX NAME)

MF C28 H62 N4 O4 . x Cl H

LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA CAplus document type: Patent

RL.P Roles from patents: PREP (Preparation)

CRN (63888-71-1)

PAGE 1-A

•x HCl

PAGE 1-B

1 REFERENCES IN FILE CA (1907 TO DATE) 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

AN 87:151695 CA

TI Bactericidal alkylenepolyamines

IN Ito, Hirohiko; Mizuno, Yasushi; Yamamoto, Tsuneo

PA Takemoto Oil and Fat Co., Ltd., Japan

SO Jpn. Tokkyo Koho, 5 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

IC C07C093-04

CC 23-7 (Aliphatic Compounds)
 Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
		-			
PI	JP 52018047	B4	19770519	JP 1972-114766	19721117
	JP 49074412	A2	19740718		

PRAI JP 1972-114766 19721117

AB R1R2NZ(NR3Z)nNR4R5 (I; R1-5 = H, 3-alkoxy-2-hydroxypropyl; Z = C2-3 alkylene, n = 1, 2), effective bactericides and fungicides against Salmonella typhosa, etc., were prepared by reaction of H2NZ(NHZ)nNH2 (II) with alkyl glycidyl ethers. Thus, 29 parts II (Z = CH2CH2, n = 1) was heated with 70 parts 2-ethylhexyl glycidyl ether at 180° to give the corresponding I, the HCl salt of which was 90 times more effective against Salmonella typhosa than was PhOH.

GT alkoxyhydroxyalkylenepolyamine bactericide fungicide; alkylenepolyamine bactericide fungicide

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10/618117
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Bactericides, Disinfectants and Antiseptics
 IT
                      Fungicides and Fungistats
                                    (alkoxyhydroxyalkylenepolyamines)
 IT
                      63870-93-9P
                                                                              63870-95-1P
                                                                                                                                        63870-96-2P
                                                                                                                                                                                                      63888-68-6P
                                                                                                                                                                                                                                                                63888-69-7P
                      63888-70-0P
                                                                               63888-71-1P
                                                                                                                                           63888-72-2P
                                                                                                                                                                                                      63888-73-3P
                                                                                                                                                                                                                                                                63888-74-4P
                      63888-75-5P
                                                                          63888-76-6P
                                                                                                                                           63888-77-7P
                                                                                                                                                                                                      63888-78-8P
                                                                                                                                                                                                                                                                63928-92-7P
                      63928-93-8P
                                                                               64117-57-3P
                                                                                                                                           64117-58-4P
                     RL: SPN (Synthetic preparation); PREP (Preparation)
                                    (preparation of)
 TT
                      111-40-0
                     RL: RCT (Reactant); RACT (Reactant or reagent)
                                   (reaction of, with (ethylhexyloxy)oxirane)
 IT
                      2461-15-6
                                                                       29756-57-8
                                                                                                                              63870-94-0
                     RL: RCT (Reactant); RACT (Reactant or reagent)
                                   (reaction of, with diethylenetriamine)
                      105-83-9
 TT
                     RL: RCT (Reactant); RACT (Reactant or reagent)
                                   (reaction of, with ethylhexyl glycidyl ether)
 IT
                      112-24-3
                     RL: RCT (Reactant); RACT (Reactant or reagent)
                                   (reaction of, with octyl glycidyl ether)
 L20
                    ANSWER 9 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN
RN
                     63888-71-1 REGISTRY
ED
                     Entered STN: 16 Nov 1984
 CN
                      9,26-Dioxa-13,16,19,22-tetraazatetratriacontane-11,24-diol (9CI)
                                                                                                                                                                                                                                                                                                           (CA
                      INDEX NAME)
 FS
                     3D CONCORD
                     C28 H62 N4 O4
MF
CI
                     COM
LC
                     STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Patent
                             Roles from patents: PREP (Preparation)
                                                                                                                                                                                                                                                     PAGE 1-A
                                                                                                   ОН
                     \text{Me}^- (CH<sub>2</sub>)<sub>7</sub>-O-CH<sub>2</sub>-CH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-NH-CH<sub>2</sub>-
                                                                                                                                                                                                                                                     PAGE 1-B
                                                               OH
- CH<sub>2</sub>- NH- CH<sub>2</sub>- CH- CH<sub>2</sub>- O- (CH<sub>2</sub>) _{7}- Me
Predicted Properties (PPROP)
```

VALUE

CONDITION

NOTE

PROPERTY (CODE)

=======================================	+======================================	+==========	- -
Bioconc. Factor (BCF)	11.0	pH 1 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 2 25 deg C	(1)
Bioconc. Factor (BCF)	11.0	pH 3 25 deg C	(1)
Bioconc. Factor (BCF)	11.0	pH 4 25 deg C	(1)
Bioconc. Factor (BCF)	11.0		
Bioconc. Factor (BCF)		pH 5 25 deg C	(1)
	11.0	[pH 6 25 deg C	(1)
Bioconc. Factor (BCF)	1.0	pH 7 25 deg C	(1)
Bioconc. Factor (BCF)	3.38	pH 8 25 deg C	(1)
Bioconc. Factor (BCF)	131.89	pH 9 25 deg C	(1)
Bioconc. Factor (BCF)	1084.93	pH 10 25 deg C	(1)
Boiling Point (BP)	627.2+/-55.0 deg C	760 Torr	(1)
Density (DEN)	0.970+/-0.06 g/cm**3	760 Torr	(1)
Enthalpy of Vap. (HVAP)	106.39+/-6.0 kJ/mol	[760 Torr [(1)
Flash Point (FP)	333.1+/-31.5 deg C	[[(1)
Freely Rotatable Bonds (FRB)	33	1	(1)
H acceptors (HAC)	8		(1)
H donors (HD)	6		(1)
Hydrogen Donors/Acceptors Sum	14	į į	(1)
(HDAS)	· ·	į · į	
Koc (KOC)	1.0	pH 1 25 deg C	(1)
Koc (KOC)	11.0	pH 2 25 deg C	(1)
Koc (KOC)	1.0	pH 3 25 deg C	(1)
Koc (KOC)	11.0	pH 4 25 deg C	(1)
Koc (KOC)	11.0	pH 5 25 deg C	(1)
Koc (KOC)	11.0	pH 6 25 deg C	(1)
Koc (KOC)	11.0		
Koc (KOC)	1	pH 7 25 deg C	(1)
	13.25	pH 8 25 deg C	(1)
Koc (KOC)	517.26	pH 9 25 deg C	(1)
Koc (KOC)	4254.81	pH 10 25 deg C	(1)
logD (LOGD)	-1.38	pH 1 25 deg C	(1)
logD (LOGD)	-1.21	pH 2 25 deg C	(1)
logD (LOGD)	-0.74	pH 3 25 deg C	(1)
logD (LOGD)	-0.42	pH 4 25 deg C	(1)
logD (LOGD)	-0.14	pH 5 25 deg C	(1)
logD (LOGD)	0.35	pH 6 25 deg C	(1)
logD (LOGD)	0.68	pH 7 25 deg C	(1)
logD (LOGD)	1.88	pH 8 25 deg C	(1)
logD (LOGD)	3.48	pH 9 25 deg C	(1)
logD (LOGD)	4.39	pH 10 25 deg C	(1)
logP (LOGP)	4.692+/-0.781	25 deg C	(1)
Mass Intrinsic Solubility	0.029 g/L	25 deg C	(1)
(ISLB.MASS)	į J		(-)
Mass Solubility (SLB.MASS)	1000 g/L	pH 1 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 2 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 3 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 4 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L 1000 g/L		
Mass Solubility (SLB.MASS)			(1)
Mass Solubility (SLB.MASS)	633 g/L	pH 6 25 deg C	(1)
	300 g/L	pH 7 25 deg C	(1)
Mass Solubility (SLB.MASS)	18 g/L	pH 8 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.47 g/L	pH 9 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.057 g/L	pH 10 25 deg C	(1)
Mass Solubility (SLB.MASS)	0.067 g/L	Unbuffered Water	(1)
		pH 9.88	
		25 deg C	
Molar Intrinsic Solubility	0.000056 mol/L	25 deg C	(1)
(ISLB.MOL)			
Molar Solubility (SLB.MOL)	1.93 mol/L	рн 1 25 deg C	(1)
Molar Solubility (SLB.MOL)	1.93 mol/L	pH 2 25 deg C	(1)

```
Molar Solubility (SLB.MOL)
                              1.93 mol/L
                                                     pH 3
                                                           25 deg C
Molar Solubility (SLB.MOL)
                              1.93 mol/L
                                                     pH 4
                                                           25 deg C
                                                                       (1)
Molar Solubility (SLB.MOL)
                              1.93 mol/L
                                                     pH 5
                                                           25 deg C
                                                                       (1)
Molar Solubility (SLB.MOL)
                              1.22 mol/L
                                                     рн 6
                                                           25 deg C
                                                                       (1)
Molar Solubility (SLB.MOL)
                               0.57 mol/L
                                                     рн 7
                                                           25 deg C
                                                                       (1)
Molar Solubility (SLB.MOL)
                               0.035 mol/L
                                                     pH 8 25 deg C
                                                                       (1)
Molar Solubility (SLB.MOL)
                               0.00091 mol/L
                                                     pH 9 25 deg C
                                                                       (1)
Molar Solubility (SLB.MOL)
                               0.00011 mol/L
                                                     pH 10 25 deg C
                                                                       (1)
Molar Solubility (SLB.MOL)
                               0.00013 mol/L
                                                     |Unbuffered Water|(1)
                                                     pH 9.88
                                                     25 deg C
Molar Volume (MVOL)
                               534.4+/-3.0 cm**3/mol|20 deg C
                                                                       (1)
                                                     760 Torr
Molecular Weight (MW)
                               518.82
                                                                       (1)
pKa (PKA)
                               13.73+/-0.20
                                                     Most Acidic
                                                                       (1)
                                                     25 deq C
pKa (PKA)
                               9.88+/-0.19
                                                     Most Basic
                                                                       (1)
                                                     25 deg C
Polar Surface Area (PSA)
                               107.04 A**2
                                                                       (1)
Vapor Pressure (VP)
                              2.33E-18 Torr
                                                     25 deg C
                                                                      (1)
```

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.14 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

```
AN
     87:151695 CA
TI
     Bactericidal alkylenepolyamines
IN
     Ito, Hirohiko; Mizuno, Yasushi; Yamamoto, Tsuneo
PΑ
     Takemoto Oil and Fat Co., Ltd., Japan
SO
     Jpn. Tokkyo Koho, 5 pp.
     CODEN: JAXXAD
DT
    Patent
LΑ
     Japanese
IC
    C07C093-04
CC
     23-7 (Aliphatic Compounds)
     Section cross-reference(s): 63
FAN.CNT 1
    PATENT NO.
                     KIND DATE
                                          APPLICATION NO. DATE
     -----
                     _ _ _ _
                           ------
                                          -----
PΙ
     JP 52018047
                      B4
                           19770519
                                          JP 1972-114766
                                                           19721117
     JP 49074412
                     A2
                           19740718
PRAI JP 1972-114766 19721117
    R1R2NZ(NR3Z)nNR4R5 (I; R1-5 = H, 3-alkoxy-2-hydroxypropyl; Z = C2-3
    alkylene, n = 1, 2), effective bactericides and fungicides against
    Salmonella typhosa, etc., were prepared by reaction of H2NZ(NHZ)nNH2 (II)
    with alkyl glycidyl ethers. Thus, 29 parts II (Z = CH2CH2, n = 1) was
    heated with 70 parts 2-ethylhexyl glycidyl ether at 180° to give
    the corresponding I, the HCl salt of which was 90 times more effective
    against Salmonella typhosa than was PhOH.
ST
    alkoxyhydroxyalkylenepolyamine bactericide fungicide; alkylenepolyamine
    bactericide fungicide
    Bactericides, Disinfectants and Antiseptics
    Fungicides and Fungistats
        (alkoxyhydroxyalkylenepolyamines)
```

```
IT
     63870-93-9P
                  .63870-95-1P
                                 63870-96-2P
                                               63888-68-6P
                                                              63888-69-7P
    ·63888-70-0P
                   63888-71-1P
                                 63888-72-2P
                                               63888-73-3P
                                                              63888-74-4P
                   63888-76-6P
     63888-75-5P
                                 63888-77-7P
                                               63888-78-8P
                                                              63928-92-7P
     63928-93-8P
                   64117-57-3P
                                 64117-58-4P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
IT
     111-40-0
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with (ethylhexyloxy)oxirane)
IT
     2461-15-6
                29756-57-8
                             63870-94-0
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with diethylenetriamine)
     105-83-9
TT
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with ethylhexyl glycidyl ether)
IT
     112-24-3
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with octyl glycidyl ether)
    ANSWER 10 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN
L20
     37997-92-5 REGISTRY
RN
ED
     Entered STN: 16 Nov 1984
CN
     9-Octadecenoic acid (9Z)-, 19-amino-2,6-dihydroxy-4-oxa-8,11,14,17-
     tetraazanonadec-1-yl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
     9-Octadecenoic acid (Z)-, 19-amino-2,6-dihydroxy-4-oxa-8,11,14,17-
     tetraazanonadec-1-yl ester
FS
     STEREOSEARCH
     C32 H67 N5 O5
MF
     STN Files:
                  CA, CAPLUS, IFICDB, IFIPAT, IFIUDB
LC
DT.CA CAplus document type: Patent
```

Double bond geometry as shown.

Roles from patents: USES (Uses)

PAGE 1-A

PAGE 1-B

$$\begin{array}{c|c}
O & & \\
\hline
O & (CH_2) & \overline{7} & \overline{Z} \\
\end{array}$$
(CH₂) $\overline{7}$ Me

RL.P

10/618117
Predicted Properties (PPROP)

PROPERTY (CODE)	VALUE	CONDITION	NOTE
Bioconc. Factor (BCF) Boiling Point (BP) Density (DEN) Enthalpy of Vap. (HVAP) Flash Point (FP) Freely Rotatable Bonds (FRB) H acceptors (HAC) H donors (HD) Hydrogen Donors/Acceptors Sum (HDAS)	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 37.29 904.10 707.8+/-60.0 deg C 1.011+/-0.06 g/cm**3 118.31+/-6.0 kJ/mol 381.8+/-32.9 deg C 38 10 8	pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C pH 10 25 deg C 760 Torr 760 Torr 760 Torr	(1) (1)
Koc (KOC) LogD (LOGD)	1.0 1.0 1.0 1.0 1.0 1.0 1.34 130.88 3173.14 -2.15 -1.91 -1.23 -0.51 -0.23 -0.16 0.03 0.99 2.98 4.37 4.915+/-0.881 0.024 g/L	pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 9 25 deg C pH 10 25 deg C 25 deg C 25 deg C	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Mass Solubility (SLB.MASS)	999 g/L 999 g/L 999 g/L 999 g/L 999 g/L 180 g/L 1.7 g/L	pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C Unbuffered Water pH 9.97 25 deg C	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)

```
(ISLB.MOL)
Molar Solubility (SLB.MOL)
                                1.66 mol/L
                                                       pH 1
                                                             25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                                                       pH 2
                                1.66 mol/L
                                                             25 deg C
                                                                          (1)
                                                       pH 3
Molar Solubility (SLB.MOL)
                                1.66 mol/L
                                                             25 deg C
                                                                          (1)
Molar Solubility (SLB.MOL)
                                1.66 mol/L
                                                       pH 4
                                                             25 deg C
                                                                         (1)
Molar Solubility (SLB.MOL)
                               1.66 mol/L
                                                       pH 5
                                                             25 deg C
                                                                         l (1)
Molar Solubility (SLB.MOL)
                                1.66 mol/L
                                                       pH 6
                                                             25 deg C
                                                                         (1)
Molar Solubility (SLB.MOL)
                                1.66 mol/L
                                                       pH 7
                                                             25 deg C
                                                                         (1)
Molar Solubility (SLB.MOL)
                                0.30 \text{ mol/L}
                                                       pH 8
                                                             25 deg C
                                                                         (1)
Molar Solubility (SLB.MOL)
                                0.0029 mol/L
                                                       pH 9
                                                             25 deg C
                                                                         (1)
Molar Solubility (SLB.MOL)
                                0.00012 \text{ mol/L}
                                                       pH 10 25 deg C
                                                                         (1)
Molar Solubility (SLB.MOL)
                                0.00013 mol/L
                                                       Unbuffered Water | (1)
                                                       pH 9.97
                                                       25 deg C
Molar Volume (MVOL)
                                594.9+/-3.0 cm**3/mol 20 deg C
                                                                          (1)
                                                       760 Torr
Molecular Weight (MW)
                                601.90
                                                                          (1)
pKa (PKA)
                                13.09+/-0.20
                                                       Most Acidic
                                                                          (1)
                                                       25 deg C
pKa (PKA)
                                9.77 + / - 0.19
                                                       Most Basic
                                                                          (1)
                                                       25 deg C
Polar Surface Area (PSA)
                               150.13 A**2
                                                                          (1)
Vapor Pressure (VP)
                               |3.77E-23 Torr
                                                       25 deg C
                                                                         (1)
```

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.19 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

```
AN 77:78458 CA
```

- TI Corrosion-inhibited aqueous alkaline solutions for cleaning a ferrous metal surface
- IN Teumac, Fred Norman; Harriman, Lester W.
- PA Dow Chemical Co.
- SO U.S., 4 pp.

CODEN: USXXAM

- DT Patent
- LA English
- IC C23G; B08B
- NCL 134002000
- CC 55-9 (Ferrous Metals and Alloys)
 Section cross-reference(s): 46

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 3668009 / A 19720606 US 1970-28079 19700413

PRAI US 1970-28079 19700413

AB Hard deposits, e.g. boiler scale, are removed from ferrous surfaces by contact with aqueous alkaline cleaning solns. containing 0.1-40 weight % of an ammoniated

polycarboxylic acid complexing agent. A corrosion inhibitor in an amount of 0.0005-0.1 weight % is added to the cleaning solution. The corrosion inhibitor has the formula RCO[OCH2CH(OH)CH2]aNH(CH2CH2NH)bH, in which R is a C12-18 alkyl or alkenyl group, a is 1 or 2, and b is 1-5. Ammoniated EDTA is claimed as a complexing agent and thioethylamine, Na

mercaptobenzothiazole, bis(ethylamine) disulfide, and thiazolidine are claimed as synergistic additives to the inhibited cleaning solution. These S compds. are added in amts. of 0.01-0.1 weight %.

ST corrosion inhibited ferrous cleaners; thioethylamine corrosion inhibitor; thiazolidine corrosion inhibitor; mercaptobenzothizole sodium corrosion inhibitor; bisethylamine disulfide corrosion inhibitor; amine corrosion inhibitor steel; steel cleaner corrosion inhibited

IT Carboxylic acids, compounds

RL: USES (Uses)

(ammonium salts, corrosion inhibitors, for steam boiler cleaning)

IT Scale (coating)

(boiler, removal of, corrosion inhibitor-containing alkaline solns. for)

IT Corrosion inhibitors

(for steel, in cleaning of steam boilers)

IT Amines, uses and miscellaneous

RL: USES (Uses)

(poly-, corrosion inhibitor, for steam boiler cleaning)

IT Boilers

(steam, cleaning solns. containing corrosion inhibitors for)

IT Fatty acids, uses and miscellaneous

RL: USES (Uses)

(tall oil, corrosion inhibitor, for steam boiler cleaning)

IT 12597-69-2, uses and miscellaneous

RL: USES (Uses)

(cleaning of mild, in steam boilers, inhibitors for)

IΤ 149-30-4 60-23-1 504-78-9 7379-26-2 37340-75-3 37340-76-4 37997-83-4 37997-84-5 37997-85-6 37997-86-7 37997-87-8 37997-88-9 37997-89-0 37997-90-3 37997-91-4 37997-92-5

RL: USES (Uses)

(corrosion inhibitor, for steam boiler cleaning)

IT 106-89-8, uses and miscellaneous

RL: USES (Uses)

(corrosion inhibitors containing, for steam boiler cleaning)

L20 ANSWER 11 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN

RN 37997-91-4 REGISTRY

ED Entered STN: 16 Nov 1984

CN 9-Octadecenoic acid (9Z)-, 16-amino-2,6-dihydroxy-4-oxa-8,11,14-triazahexadec-1-yl ester (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 9-Octadecenoic acid (Z)-, 16-amino-2,6-dihydroxy-4-oxa-8,11,14triazahexadec-1-yl ester

FS STEREOSEARCH

MF C30 H62 N4 O5

LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB

DT.CA CAplus document type: Patent

RL.P Roles from patents: USES (Uses)

Double bond geometry as shown.

$$\sim$$
 (CH₂)₇ \sim \sim Me

Predicted Properties (PPROP)

PROPERTY (CODE)	VALUE	CONDITION	NOTE
Bioconc. Factor (BCF) Boiling Point (BP) Density (DEN) Enthalpy of Vap. (HVAP) Flash Point (FP) Freely Rotatable Bonds (FRB) H acceptors (HAC) H donors (HD) Hydrogen Donors/Acceptors Sum (HDAS)	1.0 1.0 1.0 1.0 1.0 1.0 1.0 3.42 158.95 2012.97 672.7+/-55.0 deg C 1.010+/-0.06 g/cm**3 113.07+/-6.0 kJ/mol 360.6+/-31.5 deg C 35 9 7 16	pH 1 25 deg C pH 2 25 deg C pH 3 25 deg C pH 4 25 deg C pH 5 25 deg C pH 6 25 deg C pH 7 25 deg C pH 8 25 deg C pH 9 25 deg C pH 10 25 deg C pH 10 7 25 deg C pH	+==== (1) (1) (1) (1) (1) (1) (1) (1)
Koc (KOC) LogD (LOGD)	1.0 1.0 1.0 1.0 1.0 1.36 10.31 479.15 6068.11 -0.85 -0.65 -0.17 0.11 0.36 0.85 1.14 2.02 3.68 4.79 5.221+/-0.772	PH 1	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)

Mass Intrinsic Solubility (ISLB.MASS)	0.011 g/L 	25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 1 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 2 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 3 25 deg C	(1)
Mass Solubility (SLB.MASS)	1000 g/L	pH 4 25 deg C	(1)
Mass Solubility (SLB.MASS)	821 g/L	pH 5 25 deg C	(1)
Mass Solubility (SLB.MASS)	270 g/L	pH 6 25 deg C	(1)
Mass Solubility (SLB.MASS)	130 g/L	pH 7 25 deg C	(1)
Mass Solubility (SLB.MASS)	150 g/L 16 g/L		
Mass Solubility (SLB.MASS)	0.35 g/L		(1)
Mass Solubility (SLB.MASS)	0.027 g/L	pH 9 25 deg C	(1)
Mass Solubility (SLB.MASS)		pH 10 25 deg C	(1)
mass solubility (SLB.MASS)	0.045 g/L	Unbuffered Water	(1)
		pH 9.73	ļ
Molar Intringia Colubility	0 000000 1/5	25 deg C	/->
Molar Intrinsic Solubility (ISLB.MOL)	0.000020 mol/L	25 deg C	(1)
Molar Solubility (SLB.MOL)	1.79 mol/L	pH 1 25 deg C	(1)
Molar Solubility (SLB.MOL)	1.79 mol/L	pH 2 25 deg C	(1)
Molar Solubility (SLB.MOL)	1.79 mol/L	pH 3 25 deg C	(1)
Molar Solubility (SLB.MOL)	1.79 mol/L	pH 4 25 deg C	(1)
Molar Solubility (SLB.MOL)	1.47 mol/L	pH 5 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.48 mol/L	pH 6 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.24 mol/L	pH 7 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.029 mol/L	pH 8 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.00062 mol/L	pH 9 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000049 mol/L	pH 10 25 deg C	(1)
Molar Solubility (SLB.MOL)	0.000081 mol/L	Unbuffered Water	
1 (* – · · · – ,	· · · · · · · · · · · · · · · · · · ·	pH 9.73	_/
	j i	25 deg C	
Molar Volume (MVOL)	553.0+/-3.0 cm**3/mol		(1)
, , , , , , , , , , , , , , , , , , , ,		760 Torr	(1)
Molecular Weight (MW)	558.84	700 1011	(1)
pKa (PKA)	13.09+/-0.20	 Most Acidic	(1)
F ()	123.03.1, 0.20	25 deg C	(1)
pKa (PKA)	9.77+/-0.19	Most Basic	(1)
F ()	0.17	25 deg C	(1)
Polar Surface Area (PSA)	138.10 A**2	l aea c	(1)
Vapor Pressure (VP)	5.61E-21 Torr	 25 deg C	
.apor rrespore (vr)	12.0TE-5T TOLL	is deg c	(1)

(1) Calculated using Advanced Chemistry Development (ACD/Labs) Software V8.19 ((C) 1994-2006 ACD/Labs)

See HELP PROPERTIES for information about property data sources in REGISTRY.

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

- 77:78458 CA AN
- Corrosion-inhibited aqueous alkaline solutions for cleaning a ferrous TI metal surface
- Teumac, Fred Norman; Harriman, Lester W. IN
- PΑ Dow Chemical Co.
- U.S., 4 pp. CODEN: USXXAM so
- DTPatent
- English LA
- IC C23G; B08B

```
10/618117
NCL 134002000
     55-9 (Ferrous Metals and Alloys)
     Section cross-reference(s): 46
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                          APPLICATION NO. DATE
     -----
                                          -----
PI US 3668009 A 19720606
PRAI US 1970-28079 19700413
                                          US 1970-28079 19700413
     Hard deposits, e.g. boiler scale, are removed from ferrous surfaces by
     contact with aqueous alkaline cleaning solns. containing 0.1-40 weight % of an
ammoniated
     polycarboxylic acid complexing agent. A corrosion inhibitor in an amount of
     0.0005-0.1 weight % is added to the cleaning solution The corrosion inhibitor
     has the formula RCO[OCH2CH(OH)CH2]aNH(CH2CH2NH)bH, in which R is a C12-18
     alkyl or alkenyl group, a is 1 or 2, and b is 1-5. Ammoniated EDTA is
     claimed as a complexing agent and thioethylamine, Na
     mercaptobenzothiazole, bis(ethylamine) disulfide, and thiazolidine are
     claimed as synergistic additives to the inhibited cleaning solution These S
     compds. are added in amts. of 0.01-0.1 weight %.
ST
     corrosion inhibited ferrous cleaners; thioethylamine corrosion inhibitor;
     thiazolidine corrosion inhibitor; mercaptobenzothizole sodium corrosion
     inhibitor; bisethylamine disulfide corrosion inhibitor; amine corrosion
     inhibitor steel; steel cleaner corrosion inhibited
IT
     Carboxylic acids, compounds
     RL: USES (Uses)
        (ammonium salts, corrosion inhibitors, for steam boiler cleaning)
IT
     Scale (coating)
        (boiler, removal of, corrosion inhibitor-containing alkaline solns. for)
IT
     Corrosion inhibitors
        (for steel, in cleaning of steam boilers)
IT
     Amines, uses and miscellaneous
     RL: USES (Uses)
        (poly-, corrosion inhibitor, for steam boiler cleaning)
     Boilers
IT
        (steam, cleaning solns. containing corrosion inhibitors for)
TT
     Fatty acids, uses and miscellaneous
     RL: USES (Uses)
        (tall oil, corrosion inhibitor, for steam boiler cleaning)
IT
     12597-69-2, uses and miscellaneous
     RL: USES (Uses)
        (cleaning of mild, in steam boilers, inhibitors for)
ΙT
     51-85-4 60-23-1 149-30-4 504-78-9 7379-26-2 37340-75-3
     37340-76-4 37997-83-4 37997-84-5 37997-85-6 37997-86-7
     37997-87-8
                 37997-88-9 37997-89-0
                                           37997-90-3 37997-91-4
     37997-92-5
     RL: USES (Uses)
        (corrosion inhibitor, for steam boiler cleaning)
TΤ
     106-89-8, uses and miscellaneous
     RL: USES (Uses)
        (corrosion inhibitors containing, for steam boiler cleaning)
L20
    ANSWER 12 OF 12 REGISTRY COPYRIGHT 2006 ACS on STN
RN
     36611-09-3 REGISTRY
ED
```

Entered STN: 16 Nov 1984

1,2-Ethanediaminium, N,N'-bis[2-[[2-hydroxy-3-CN (octyloxy) propyl] methyl (phenylmethyl) ammonio] ethyl] -N, N'-dimethyl-N, N'bis (phenylmethyl) - (9CI) (CA INDEX NAME)

MF C60 H98 N4 O4

CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL STN Files: DT.CA CAplus document type: Patent

RL.P Roles from patents: PREP (Preparation)

Ring System Data

			Ring System		RID
Analysis	Sequence	the Rings	Formula	Identifier	Occurrence
EA	ES	SZ	RF	RID	Count
========	+=======	+==== == -	+ === =======	-=========	+=== === ====
·C6	C6	6	C6	46.150.18	4

PAGE 1-B

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1

- AN 77:74820 CA
- TI Antibacterial (2-hydroxyalkyl)benzylmethylammonium bromides
- IN Temple, Robert D.
- PA Procter and Gamble Co.
- SO Ger. Offen., 30 pp. CODEN: GWXXBX
- DT Patent
- LA German
- IC C07C; A61L
- CC 23-4 (Aliphatic Compounds)

Section cross-reference(s): 46

FAN.CNT 1

_				
	PATENT NO.	KIND	DATE	APPLICATION NO. DATE
P	PI DE 2151719	Α	19720420	DE 1971-2151719 19711018
	US 3719711	Α	19730306	US 1970-82067 19701019
	FR 2111700	A5	19720609	FR 1971-37370 19711018
	FR 2111700	B1	19750606	
	GB 1322636	Α	19730711	GB 1971-48369 19711018
P	PRAI US 1970-82067	19701	.019	

GI For diagram(s), see printed CA Issue.

AB Six title compds. RCH2CH(OH) - [CH2N+Me(CH2Ph)CH2]nCH(OH)CH2R Brn-(I; n = 2-4s R = C8H170 or C9H19), useful as antibact-dimethyl-ethylenediamine (II), N,N',N''-trimethyldiethylenetriamine, or N,N',N'',N'''-

30.

```
tetramethyltriethylenetetramine with III and PhCH2Br (IV). Thus,
     refluxing II and III (R = C8H170) in EtOH 16 hr, addition of IV, and
     refluxing 24 hr gave I (R = C8H170, n = 2).
ST
     hydroxyalkylammonium bromide bactericide; ammonium benzylhydroxyalkyl;
     soap bactericide hydroxyalkylammonium; detergent bactericide
     hydroxyalkylammonium
IT
    Detergents
        (bactericides for, benzyl(hydroxyalkyl)methylammonium bromides as)
IT
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (bactericides for, benzyl(hydroxyalkyl)methylammonium bromides as)
IT
     Bactericides, Disinfectants and Antiseptics
        (benzyl(hydroxyalkyl)methylammonium bromides, for detergents)
IT
     36557-85-4P
                  36557-86-5P
                                 36557-87-6P
                                              36557-88-7P 36611-08-2P
     36611-09-3P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
IT
     105-78-2
               105-84-0
                           110-70-3
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with benzyl bromide and ethoxides)
IT
                3385-66-8
    RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with ethylene polyamines and benzyl bromide)
IT
     100-39-0
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (reaction of, with ethylene polyamines and epoxides)
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3/28/06

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